

Ecological Integrity and the Green Business Hypothesis: A Tiger by the Tale

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*The great thing in this world is not so much where we stand,
but in which direction we are moving.*

Oliver Wendell Holmes

*The most promising words ever written on the maps of human knowledge are terra incognita –
unknown territory.*

Daniel J. Boorstin

Concern for the environment is not new. In a North American, if not global, context the organizational and ideological roots of environmentalism can be traced to the progressive conservation movement of the late 19th century that emerged in response to the perceived exploitation of natural resources. The result of this initial environmental concern was a series of conferences and conventions that are notable for at least two reasons. First, they provided a forum to discuss natural resource use policy, including policy alternatives to the prevailing “doctrine of usefulness”. Second, they raised many of the same issues that resource and environmental managers continue to debate today. The North American Conservation Conference in 1909, for example, resulted in a Declaration of Principles that called for “legislation to preserve and protect wildlife, to prevent soil erosion and water pollution, and generally to manage renewable resources in such a way as to ensure their continued productivity in the future” (Krueger and Mitchell, 1976, 2).

The energy and enthusiasm of these early policy discussions abated with the onset of World War I, but they left a legacy of ideas, organizations and government agencies. Notable examples in the US context are the Sierra Club, the National Audubon Society, the National Park Service, and the Forest Service. The next substantive wave of environmental concern emerged in the 1960s, propelled in part by the *Resources for Tomorrow* Conference (1961), the disclosures of *Silent Spring* (Carson, 1962), and the efforts of the Sierra Club to call attention to threats to natural beauty. This period marked an ideological shift toward conservation and environmental management. The birth of the modern environmental movement is typically marked by the Earth Day celebrations of April 22, 1970. Two years later, the United Nations Conference on the Human Environment and two books, *The Limits to Growth* (Meadows *et al*, 1972) and *The Population Bomb* (Ehrlich, 1972) consolidated human concern about the deterioration of the environment and unconstrained resource consumption.

In the years since these watershed events, perceptions and attitudes toward the environment have continued to evolve. The 1970s and 1980s were periods of extensive regulation, directed primarily at domestic issues such as water quality and hazardous waste (Cairncross, 1991). The introduction of these regulations, often with little explicit acknowledgement or understanding of the cost of implementing them, was supported by a succession of high profile environmental incidents in the mid-to-late-1980s that galvanized societal concern about the presence and effectiveness of environmental management programs in industry. The escape of toxic gas from a Union Carbide chemical plant in Bhopal, India (1985) that killed over 6,000 people, a chemical spill from a Sandoz plant in Switzerland that severely damaged the Rhine River, and the Exxon Valdez oil spill in Prince William Sound, Alaska are three prominent examples of such incidents.

The 1990s have seen a third ideological shift. Recognition of the global nature of environmental problems and an increased acceptance of ecological interdependence has introduced new language to the environmental debate, notably the concept of sustainability. And so it is that planning and decision-making frameworks to foster sustainability have been undertaken in many countries. Examples include Holland's National Environmental Policy Plan, *To Choose or to Lose*, the UK's White Paper, *This Common Inheritance*, and *Sustainable Development: The UK Strategy*, Japan's *New Earth 21*, and the European Commission's Fifth Environmental Action Program, *Toward Sustainability* (Elkington, 1994). Moreover, the 2050 Project, a collaborative venture involving the World Resources Institute, the Brookings Institution, and the Sante Fe Institute, is an attempt to define the conditions under which global society could be sustainable in 2050 and is reflective of the change in environmental thinking and planning. So too, is the 2030 Project, an effort undertaken by the Sustainable Development Research Institute at the University of British Columbia that attempts to model environmental change in the Lower Mainland region of British Columbia over four decades and facilitate improved environmental decision making. The underlying theme that links these activities, apart from a focus on global issues and ecological interdependence, is an increased willingness on the part of government, industry, and other stakeholders to examine the role that environmental management can play in business and strategic planning. The environment is no longer seen solely as a scientific or technical issue; it is also seen as a strategic issue that can potentially shape broad government and corporate policy. It is an exciting time, but the sustainability era is still in its nascent stages and the way ahead is not clear. How can business and industry institutionalize sustainability? What is the most efficient and effective route to sustainability? Like the explorers of old, society is moving into unmapped territory.

Against this backdrop, Table 1 summarizes a combined option-strategy protocol that may serve as a compass to assist business in becoming sustainable. It reflects earlier work by

Haddon (1970) and Regier and France (1990) and illustrates how ideas and approaches in one field may inform the development of solutions in another.

Table 1
Combined Option-Strategy Protocol for Business Sustainability

Integrity Level	Extent of Reform	Escaped Tiger Level	Management Action for Business Sustainability
1.	Deep Reform	Prevent energy marshalling (1)	Business transformation: <ul style="list-style-type: none"> - radical resource productivity - closed loop production - solutions-based business - protection of natural capital
		Reduce energy marshalling (2)	Programs to systematically reduce negative environmental <u>and</u> social impacts <ul style="list-style-type: none"> - social audits as well as environmental - overall resource efficiency improved - economic measures broaden
		Prevent energy release (3)	Thinking about environmental management broadens to embrace sustainability: <ul style="list-style-type: none"> - improve resource productivity - protect natural capital - invest in social capital
2.	Partial Reform	Modify rate or spatial scale of energy release (4)	<ul style="list-style-type: none"> - programs to reduce environmental footprint of business - some thinking about social capital
		Time/space separation of energy release (5)	<ul style="list-style-type: none"> - pollution prevention programs - closed loop production as evolution of EMS
3.	Incremental Advances	Separation by barrier interposition (6)	<ul style="list-style-type: none"> - develop EMS to international standard (ISO 14001) - begin to question where and how environmental activity can support business objectives
		Modify contact surface (7)	<ul style="list-style-type: none"> - develop environmental management system (EMS) - awareness of business "footprint"
4.	Holding the Line	Strengthen structure (8)	<ul style="list-style-type: none"> - develop audit programs - beginning of systems thinking

5.	Slowing the Rate of Retreat	Generation of signal in response to damage (9)	<ul style="list-style-type: none"> - ad hoc programs for "key" environmental risks (those that are visible or regulated) - monitoring and measuring, but not linked to business planning
		Return to pre-event and stabilization of altered state (10)	<ul style="list-style-type: none"> - comply with law (or try to)

In his celebrated paper, *Environmental Management in Development: The Evolution of Paradigms* (1990, 32), Michael Colby observed that behavioral and cultural factors retard change, despite economic imperatives:

It is possible that by restructuring along the lines of eco-development, companies and economies might develop new comparative advantages that will help to make those that are quickest to adjust more competitive and prosperous in the long run, rather than less so, as is frequently heard today. Some developing countries might even be able to "leapfrog" over the "environmental protection" phase to a much more sustainable as well as self-defined state of development.

Many environmental activities and events have taken place since Coby's paper, events that have done much to overcome behavioral and cultural barriers to environmental improvement. An equal measure of diligence for the foreseeable future on practical tools that improve environmental planning and decision making will help society collectively achieve the sustainable future that Colby envisioned. This combined option-strategy protocol for business sustainability is a modest contribution in this regard.

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